



Joint Research Centre

the European Commission's
in-house science service

GeoDCAT-AP

An RDF profile for geospatial metadata

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Geodata on the Web Conference

Amersfoort, 10 Feb 2016

INSPIRE in a nutshell

Purpose

Providing access to cross-border EU data to be used in support to

- EU environmental policies
- Policies or activities which impact on the environment

Process

Development & revision process involving experts & stakeholders from all EU Member States (public & private sectors, research institutions)

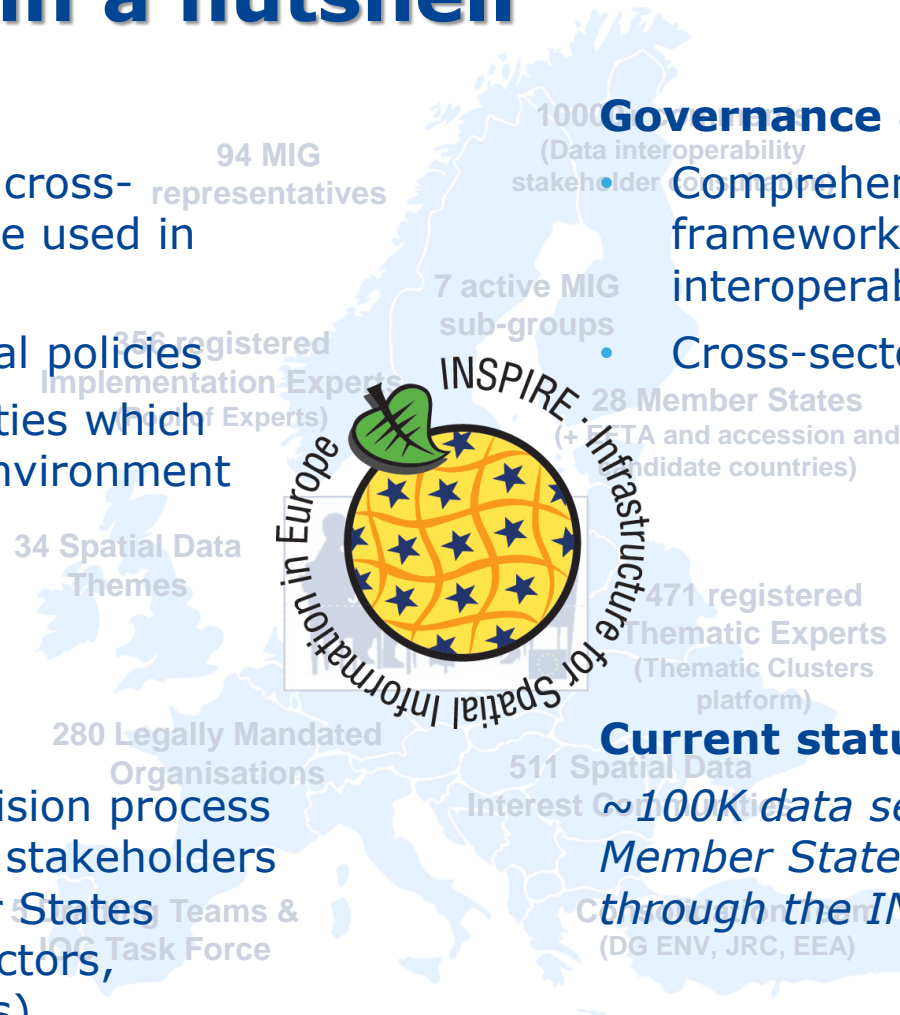
Governance & scope

Comprehensive legal & technical framework for data & service interoperability

Cross-sector thematic scope

Current status

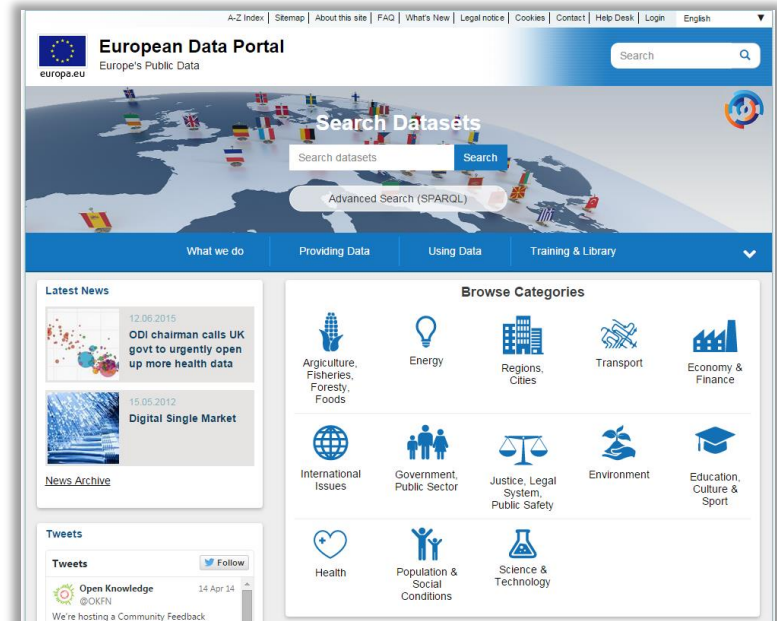
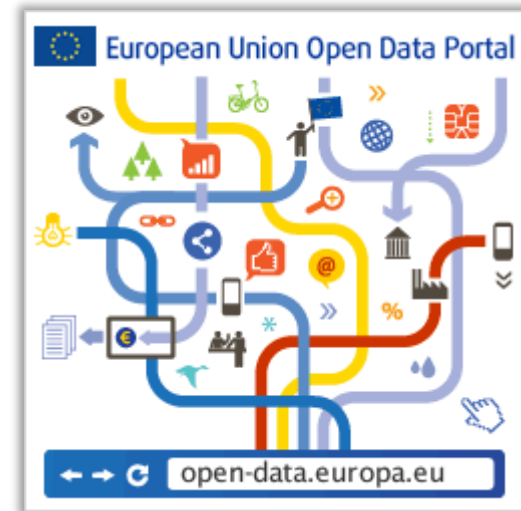
~100K data sets from EU Member States, discoverable through the INSPIRE Geoportal



INSPIRE, PSI & Open Data

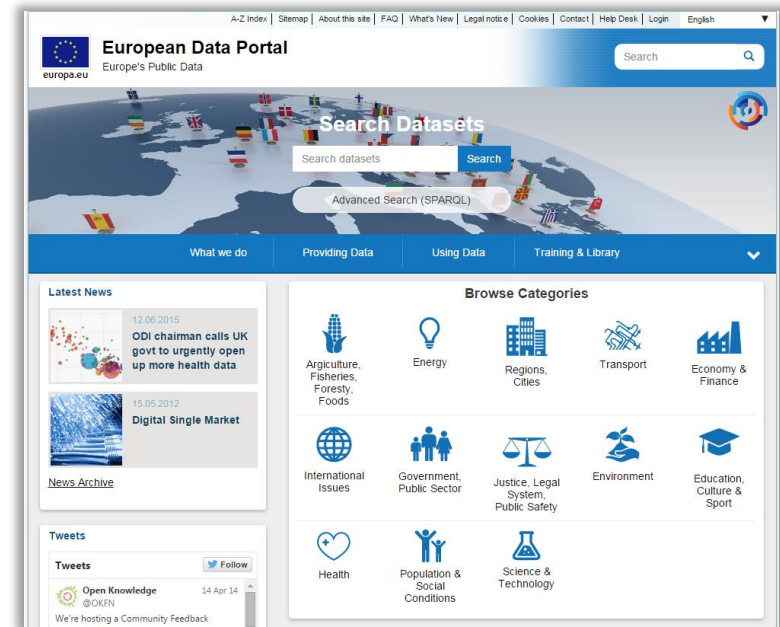
EU activities and regulations

- Communication on Open Data (COM(2011)882)
- Revision to the Decision governing re-use of Commission's documents (2011/833/EU)
- Revision to the Directive on re-use of Public Sector Information (2013/37/EU)
- EU Programme on Interoperability Solutions for European Public Administrations (ISA)



The European Data Portal

- A single access point for the cross-border discovery of datasets available from EU data portals
- It will harvest any kind of dataset metadata
- The **geospatial component** plays an important role in the underlying infrastructure
- Complemented with additional services – as an **EU gazetteer**
- Based on harmonised and cross-domain metadata interchange formats



What is GeoDCAT-AP

- Geospatial extension to DCAT-AP (DCAT application profile for data portals in Europe)
 - DCAT-AP is a metadata profile meant to provide an interchange format for data portals operated by EU Member States
- Developed in the framework of the EU Programme “Interoperability Solutions for European Public Administrations” (ISA)
- GeoDCAT-AP is meant to provide a DCAT-AP compliant representation for the set of metadata elements included in
 - INSPIRE metadata
 - The core profile of ISO 19115



INSPIRE & GeoDCAT-AP: Why?



Agree upon a common RDF representation

- RDF is increasingly being used as an alternative representation of INSPIRE metadata
- Without a harmonised INSPIRE-to-RDF mapping, metadata interoperability is lost

Facilitate cross-sector sharing of INSPIRE metadata

- INSPIRE metadata are already being harvested by and published in cross-domain data portals at the national and/or regional level
- INSPIRE metadata will be harvested and published on the European Data Portal, which uses DCAT-AP as a metadata interchange format

GeoDCAT-AP: current status

- Final specification (**GeoDCAT-AP 1.0**) released in **December 2015**:

https://joinup.ec.europa.eu/asset/dcat_application_profile/asset_release/geodcat-ap-v10

- **Reference implementation** (XSLT-based):

<https://webgate.ec.europa.eu/CITnet/stash/projects/ODCKAN/repos/iso-19139-to-dcat-ap/>

- **GeoDCAT-AP implementations**, including **CSW**-based ones, are already available:

<https://joinup.ec.europa.eu/node/144843>

GeoDCAT-AP API & Sandbox

GeoDCAT-AP API

Proof-of-concept of the implementation of GeoDCAT-AP using the standard CSW interface, and supporting multiple RDF serialisations (including HTML+RDFa) and HTTP content negotiation

<http://geodcat-ap.semic.eu:8890/api/>

INSPIRE GeoDCAT-AP Sandbox (to be released)

Faceted browser / SPARQL endpoint for records harvested from the INSPIRE Geoportal and transformed into GeoDCAT-AP

GeoDCAT-AP API

Output Schema :

Transform

Output format :

Usage notes

Copy & paste the URL of a file or of a CSW request returning ISO 19139 records.

Supported CSW request types: GetRecords, GetRecordById.

Supported CSW output schema: <http://www.isotc211.org/2005/gmd>

NB: The current version of the API supports only CSW calls using the GET HTTP method.

A description of the GeoDCAT-AP API is available on the [API's Stash repository](#).

GeoDCAT-AP: open issues

- Lack of vocabularies able to model some information – in particular:
 - reference systems
 - spatial / temporal resolution
 - data quality
- Limited use of **global & persistent identifiers** (in particular, HTTP URIs) in the original metadata records. Some consequences:
 - impossible to (safely) implement incremental harvesting
 - impossible to unambiguously identify resources referred to from metadata (keywords from reference vocabularies, responsible organisations, licences, etc.)
 - faceted search (esp., language neutral) cannot be effectively implemented



Thanks for your attention!

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For more information

- GeoDCAT-AP 1.0 specification

https://joinup.ec.europa.eu/asset/dcat_application_profile/asset_release/geodcat-ap-v10

- GeoDCAT-AP implementations

<https://joinup.ec.europa.eu/node/144843>

- GeoDCAT-AP XSLT

<https://webgate.ec.europa.eu/CITnet/stash/projects/ODCKAN/repos/iso-19139-to-dcat-ap/>

- GeoDCAT-AP API (demo)

<http://geodcat-ap.semic.eu:8890/api/>